

CLAIMS LISTING

1.(currently amended) A gantry for use in the construction process of bridges, viaducts and other structures, said gantry comprising:

~~a~~ an essentially elongated main structure;

at least one unbonded cable with one end secured to said main structure by a first anchorage and the opposite end of said unbonded cable secured to a different location on said main structure by a second anchorage;

~~a first anchorage for securing one end of said unbonded cable to the said structure and a second anchorage for securing the opposite end of said unbonded cable to the said structure;~~

~~characterized in that there is provided at least one sensor unit capable of measuring a physical variation in the said main structure indicative of loading or internal forces of the main structure, an electronic interface converting said measurements into readable data and providing said data to a controller; and~~

an actuator ~~which rests~~ resting permanently between said main structure and said unbonded cable; ~~adapted to vary the tension of said unbonded cable according to~~

~~said controller, such that said tension is increased in response to increased loading or internal forces of said main structure, or decreased in response to decreased loading or internal forces of said main structure~~

at least one sensor unit capable of noting measurements of physical variations on said main structure and communicating said measurements to an electronic interface which converts them into readable data accepted by a controller that controls the extension of said actuator, such that said actuator extends or retracts in order to increase or decrease, respectively, the tension of said unbonded cable in accordance with an increase or decrease of the loading or internal forces present on said main structure.

2.(cancelled)

3.(currently amended) A gantry according to claim 1 ~~and 2,~~
~~characterised in that the said computer program or processing code is capable of reading the said data transmitted by the said sensor and calculating~~ wherein said controller controls the intensity ~~and/or~~ and direction of the force ~~to be~~ applied by the said actuator on the said unbonded cable.

4.(cancelled)

5.(currently amended) A gantry according to claim 1,
~~characterised in that the~~ wherein said unbonded cable ~~can~~
~~be~~ is internal or external to the contours of said main
structure.

6.(currently amended) A gantry according to claim 1 ~~and 5~~,
~~characterised in that~~ wherein said unbonded cable has a
linear or multi-linear layout.

7.(cancelled)

8-9.(cancelled)

10.(currently amended) A gantry according to claim 1,
~~characterised in that~~ wherein said actuator is at least one
extendable strut with a first end removably connected to a
saddle ~~that supports the said~~ in contact with said unbonded
cable and a second end ~~removable~~ removably connected to
said main structure.

11.(currently amended) A gantry according to claim 1 ~~and~~ 10,
~~characterised in that the strut or struts which support~~
~~said saddles are~~ wherein said strut is retractable or
movable, by translation or rotation.

12-15.(cancelled)

16.(currently amended) A gantry according to claim 1,
~~characterised in that it is capable of providing~~ wherein

said gantry provides support for formwork (in situ casting structures) or for precast segments, precast girders, or even for other material structural elements.

17.(currently amended) A method for providing a pre-existing gantry with a self-adjusting prestressing system,
~~characterized in that the~~ wherein said pre-existing gantry is equipped with the elements of claim 1.

18.(new) A gantry according to claim 1, wherein said actuator is capable of dislodging said first or said second anchorage towards or away from said main structure so as to respectively decrease or increase the tension of said unbonded cable.